Klamath National Forest

Best Management Practices

REGION 5
EVALUATION PROGRAM
WATER QUALITY
MONITORING REPORT

Evaluation of
Forest Service Administered Projects
Including, Timber Sales, Roads,
Prescribed Fire, Mining Activities
and Revegetation Activities During
2001
www.r5.fs.fed.us/klamath/mgmt/reports/monitor.html

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KLAMATH NATIONAL FOREST
2001
BEST MANAGEMENT PRACTICES (BMP)
EXECUTIVE SUMMARY

This year (2001) represents the tenth year of the Best Management Practices Evaluation Program (BMPEP) on the Klamath National Forest. This program is designed to evaluate how well the Forest implements BMPs and how effective the BMPs are in keeping sediment out of water courses. On site evaluations have been divided into 28 categories that reflect timber, engineering, recreation, grazing, fire, mining, and vegetative activities and programs.

In 2001, 64 projects or sites were drawn at random from Forest activity pools based upon Regional activity assignments. Each project or site was reviewed for BMP implementation and effectiveness. The category and types of projects monitored were: timber (18 sites), roads (28 sites), recreation (2 sites), grazing (4 sites), mining (6 sites), fire (4 sites), and tractor piling (2 sites). Monitored activities occurred on Happy Camp, Salmon River, Scott River, Goosenest and Oak Knoll Districts

Evaluation of BMP Implementation compliance involved (1) doing what we said we were going to do to protect water quality and (2) determining project document sufficiency regarding watershed objectives. BMP Effectiveness compliance involved determining if water quality protection measures were effective in meeting management objectives. The table below summarizes the results of the BMP Evaluation Program for 2001, as well as from previous years.

Monitoring Years	Total # of Sites Monitored	Sites Meeting BMP Monitoring Criteria			
		Implementation		Effectiveness	
		# of Sites	% of Total Succesful	# of Sites	% of Total successful
1992	53	29	55%	43	81%
1993	77	61	79%	72	94%
1994	52	39	75%	46	89%
1995	77	64	83%	74	96%
1996	57	48	84%	56	98%
1997	60	60	100%	59	98%
1998	61	38	62%	30/35	86%
1999	38	25	66%	34	89%
2000	45	40	89%	43	96%
2001	**64**	**56**	**88%**	**61**	**95%**

Implementation standards for BMPs were fully compliant on 88% of the sites evaluated. BMP effectiveness requirements were met on 95% of the sites evaluated. This represents a slight but not significant decrease in BMP implementation and effectiveness compared to 2000. Areas in need of improved BMP implementation are road decommissioning, grazing and landings. Areas in need of improved BMP effectiveness are grazing, road decommisioning practices and landings.

BMP MONITORING REPORT

INTRODUCTION

On-site evaluations are the core of the BMP Evaluation Program. There are 30 different evaluation procedures designed to assess a specific practice or set of closely related practices. Evaluation procedures vary greatly based upon the management activity evaluated, but the overall evaluation process is similar. The type and number of management activities evaluated each year on the Forest are assigned by the Regional Office. The specific management activity sites evaluated are randomly selected from project pools. The criteria for sample pool development has been standardized by the Region for each activity type and are described in the BMP User's Guide (1999).

One of the goals of BMP monitoring is to strive for interdisciplinary evaluation of projects including the project proponents and watershed personnel. This gives direct feedback to the project proponent on how well the BMP was implemented and provides for adaptive management, if necessary, on future project development.

No concurrent BMP monitoring is included in this report.

SAMPLING

Data collection methods are specific for each BMP and are described in the 1999 BMP User's Guide. BMP evaluations that require monitoring soil cover use the Forest's soil cover monitoring procedures developed by the Forest in 1998. The types of data gathered is identified for each BMP and is used to answer specific evaluation questions on each BMP evaluation form. Management activities, such as timber projects, roads, prescribed fire, tractor piling require: 1) a prepared EA or EIS; 2) all contract requirements be met; and 3) at last one winter (but not more that 3 winters) has passed since contract requirements have been met.

The timber and roads project sample pool was developed from a list of closed timber sales. The prescribed fire sample pool was developed from a list of completed burn projects. The recreation sample pool was the list of all known developed sites on the Forest. The range sample pool was a list of active grazing allotments on the Forest by district.

BMP evaluations were coordinated and conducted by Tom Laurent, Sharon Koorda, Robbie Van de Water, Bill Bemis, Don Elder and District assistance.

SUMMARY BY PROJECT TYPE

T01 Streamside Management Zones

Three harvest units were reviewed from the Jack Track and Upper South Fork Timber Sales on the Scott River and Salmon River Districts. The SMZs as located on the ground varied from 50 to 300. All (100%) of the sampled SMZs met BMP implementation and effectiveness evaluation requirements.

T02 Skid Trails

Skid trails in 4 harvest units in the Upper South Fork Timber Sale on the Salmon River District were evaluated. Seven randomly selected skid trails met all evaluation criteria for BMP implementation and effectiveness requirements. The water bar failure rate was 0%.

T03 Suspended Yarding

Four harvest units from the Upper South Fork Timber Sale on the Salmon River District were evaluated. These four harvest units met all evaluation criteria for BMP implementation and effectiveness. Soil cover within these SMZs was >90%. There was no visible ground disturbance within the SMZ from yarding activities.

T04 Landings

Six timber sale landings were reviewed from the Jack Track (1) and Upper South Fork (5) Timber Sales on the Scott River and Salmon River Districts. One landing used in the Upper South Fork Timber Sale failed to meet BMP implementation and effectiveness requirements. This landing failed because it was within a riparian reserve of an intermittent stream. This landing was part of the existing road prism. This landing failed primarily because the rehabilitation did not adequately restore the drainage across the road and protect the fill slope from erosion.

T06 Special Erosion Control and Revegetation

One revegetation site was evaluated in the Upper South Fork Timber Sale. The site was a helicopter landing and access road that was located in an riparian reserve. This site was ripped, straw mulched and seeded. Post-treatment soil cover was 88%. This site met all evaluation criteria for BMP implementation and effectiveness requirements.

E08 Road Surface, Drainage and Slope Protection

Five road projects were evaluated. They consisted of construction (2), and reconstruction (2) and maintenance (1) projects from Upper South Fork Timber Sale (roads 38N27A, 37N26, 38N16 and 38N27) on the Salmon River District were reviewed. All five projects met BMP implementation and effectiveness requirements.

E09 Stream Crossing

Three stream crossings were evaluated associated with three of the roads identified under E08. Stream crossing were located on roads 38N16, 38N27 and 37N26 within the Upper South Fork Timber Sale. Crossing types were culverts (2) on a perennial and intermittent streams and a rocked dip (1) with no discernable draw. All three of the sites met BMP implementation and effectiveness requirements.

E10 Road Decommissioning

Seven road decommissioning projects (roads 18N07A, 18N13, 17N07, 37N01, 37N07B, a spur off 38N27 and T65) on the Happy Camp and Salmon River Districts were evaluated. Currently, the existing BMP database does not permit data from this BMP to be entered. The evaluations were done using professional judgement based upon how the database evaluates other BMPs. Five of the projects met BMP implementation criteria and six met BMP effectiveness requirements. The two roads that did not meet all BMP requirements were on the Salmon River District (37N01 and T65). Road T65 had the culverts pulled but the fill banks were not pulled back. Road 37N01 had problems with revegetation and channel widths were too narrow where culverts were pulled.

E11 Control of Sidecast Material

Sidecasting associated with the three roads identified under E08 was evaluated. All three sites met BMP implementation and effectiveness requirements.

E13 In-Channel Construction Practices

Four in-channel projects were evaluated on the Oak Knoll and Happy Camp Districts. The Grider Creek No. 1 Trailbridge project on the Oak Knoll District met all BMP requirements for implementation and effectiveness. Three ERFO sites were evaluated on the Happy Camp District. Two sites (roads 45N88Y and 41S22) met all BMP requirements for implementation and effectiveness. The third site (road 15N06) failed to meet BMP implementation. The problem areas were that excavated materials were not adequately removed from the channel or floodplain areas. Also, the disturbed areas of the channel were not properly returned to their natural grade. The project met met all BMP requirements for effectiveness.

E14 Temporary Roads

Two temporary roads were evaluated that accessed units 91 and 111 within the Upper South Fork Timber Sale on the Salmon River District. One road was closed to vehicle traffic and the other road was waterbarred. These two temporary roads met met all BMP requirements for implementation and effectiveness.

E16 Water Source Development

Two existing water truck drafting sites were evaluated. These two sites are located on roads 38N27 (Cecil Creek crossing) and 37N07 (Rays Gulch crossing) on the Salmon River District. Both of these sites used a short access driveway that led from the road down to the creek bank. Both sites are located within riparian reserves. Both of these sites failed the implementation portion of the BMP because water quality protection measures such as erosion control and preventing road runoff and sediment from running down the access driveway into the riparian reserve were not part of the project. In addition there was no hazemat protection when trucks are parked in the riparian reserve when pumping water into their tanks. These two sites passed the effectiveness portion of the BMP.

E17 Snow Removal

Snow removal activities on roads 40S06 and 47N44, Oak Knoll District, were evaluated. All BMP requirements for implementation and effectiveness were met.

R30 Dispersed Recreation Sites

Two dispersed recreation sites on the Happy Camp District were reviewed. The Ferry Point River Access area was evaluated and found to meet all BMP implementation and effectiveness requirements. The Creyback Vista Point site was evaluated and was found to meet all BMP implementation and effectiveness requirements.

M26 Mining Operations

Three mining operations were evaluated on Salmon River, Scott River and Happy Camp Districts. These operations were lode mining operations. All three met BMP inplementation and effectiveness requirements.

M27 Common Variety Minerals

Three rock pit was evaluated on the Happy Camp and Salmon River Districts. One site on the Happy Camp District was an old rock source that had lots of existing erosion problems. There is no current develoment plan for this site. This site did not meet the implementation requirements but met the effectiveness requirements. The other Happy Camp site met both implementation and effectiveness Requirements The rock pit on the Salmon River District met all BMP implementation and effectiveness requirements.

G24 Range Management

The new draft BMP procedure was used in evaluating four range allotments on the Scott River (Mill Creek, Shackleford and East Fork Allotments) and Goosenest (Dry Lake Allotment) Districts.

Mill Creek, East Fork and Dry Lake Allotments met all BMP requirements for implementation and effectiveness. The Log Lake portion of the Shackleford allotment did not meet BMP implementation and effectiveness requirements due to not meeting allotment ultilization standards that resulted in overgrazed areas and excessive damage to streambanks.

F25 Prescribed Fire

Four prescribed burn units were monitored on the Scott River District (units 64 Cub TS and units 23 and 27 Canon TS) and one unit on the Goosenest District (unit 50 Sharp TS). Measured post-burn soil cover varied from 85 to 98% and averaged 94%. The soil cover objectives were exceeded for all units. These burn units met all BMP requirements for implementation and effectiveness.

V28 Vegetation Manipulation

Two tractor pile units in the Upper South Fork Timber Sale were evaluated. These two units were partial cut and only had a few tractor piles. Most of the area within each unit was left undisturbed. Soil cover was estimated at 75 to 80%. The soil cover objective was 70% as identified in the Forest's LRMP. These two tractor pile units met all BMP requirements for implementation and effectiveness.

SUMMARY

Overall, 88% of the BMP evaluated sites met all implementation requirements and 95% of the sites met all effectiveness requirements. This is a slight decrease but not significant compared to the 2000 success rate. Problem areas were in landings, road decommissioning, permanent water drafting sites and grazing. There was no evidence of significant water quality impairment from the noncompliant sites.

Summary Table of BMP Implementation and Effectiveness Success Rate by Individual BMPs.

BMP	Total # of Sites	IMPLEMENTATION		EFFECTIVENESS	
		# of Sites Meeting BMP Criteria	% of Total	# of Sites Meeting BMP Criteria	% of Total
T01	3	3	100	3	100
T02	4	4	100	4	100
T03	4	4	100	4	100
T04	6	5	83	5	83
T06	1	1	100	1	100
E08	5	5	100	5	100
E09	3	3	100	3	100
E10	7	5	71	6	86
E11	3	3	100	3	100
E13	4	3	75	4	100
E14	2	2	100	2	100
E16	2	0	0	2	100
E17	2	2	100	2	100
R30	2	2	100	2	100
G24	4	3	75	3	75
M26	3	3	100	3	100
M27	3	2	67	3	100
F25	4	4	100	4	100
V28	2	2	100	2	100
TOTALS	**64**	**56**	**88**	**61**	**95**

PROBLEMS, EFFECTS AND MANAGEMENT RECOMMENDATIONS

Problem: Problems with landings located in riparian reserves (T04).

Solution: All landings that are currently in or will be in riparian reserves need to have very specific mitigation design measures that will properly restore channels, vegetation and shade. Also, hazmat mitigation needs to be included, such as removing all petroleum contaminated soil material to a proper disposal site.

Problem: Problems with road decommissioning project designs (E10).

Solution: The project that failed in this years monitoring was primarily due to time and seasonal constraints that precluded a thorough field assessment and detailed project design.

Problem: Problems with permanent water drafting sites located in riparian reserves (E16).

Solution: These existing sites need to be redesigned. This can occur as road or vegetation management projects take place. A hydrologist and engineer need to change the existing design that allows water trucks to back up almost to the streams edge when filling up. The design has to prevent road drainage from entering the stream at these sites and prevent petroleum products from being deposited on these excessively drained soils.

Problem: Grazing overultization of riparian areas (G24).

Solution: Additional concurrent monitoring of identified overutilized riparian areas and earlier intervention with permitte, if necessary, to prevent overutilization of riparian vegetation.